Desk research for Heat pump engagement and propositions

1. Heat pump uptake in the UK stats

A total of 42,779 heat pumps were installed in the UK last year, and the current rate is far below the 15.3 installs per 1000 households that the independent Climate Change Committee said will be needed to reach the country's 2050 net-zero goal. *(1)*

2. Low uptake of heat pumps – Attitudes

Participants were asked 'What is the likelihood to replace your heating system *(2)*

- 50% said they would only replace their heating system when their current one breaks down or starts to deteriorate
- 19% said they would consider replacing their heating system while it was working. The remainder answered not applicable, not their decision to make
- 28%) said it was not their decision to make or don't know

Participants were asked 'Who do you trust to give heating system installation advice' *(2),*

- 46% tradespeople
- 37% low carbon heating specialists
- 36% official websites such as Gov.UK
- 29% heating manufacturers
- 29% energy advice websites

Participants were asked what was their level of knowledge of ASHP *(2)*

- 20% knew a lot or fair amount
- 51% knew a little or hardly anything
- 29% never heard of ASHP

Conclusion for why it's for participants to unlikely to install ASHP *(2)*
The main barriers to changing to a low carbon heating system included concerns about the cost of installation (45%), a preference to wait to see how the technology develops in time (34%), or a perception that it might not be possible to install in their home (31%).

Conclusion for the perceived impact of move to renewable energy source on energy bills *(3)*
Financial benefits are perceived to be low over short term but will increase in the long term

3. Low uptake of heat pumps – Barriers

Identification of barriers for heat pumps *(2)*

- Upfront cost - Installing these devices for most homes is the disproportionately large when compared to traditional heating systems.
- They are slower at heating homes
- Better models will be available in the near future
- They might not work in your home
- They don't cut bills by very much
- They don't work well in poorly insulated homes

Consumers who considered, but did not proceed with, a heat pump installation through the Renewable Heat Incentive, feedback that the main barrier was the difficulty finding trustworthy and consistent advice bespoke to their needs. *(3)*

4. Existing Heat pump propositions

Heat Pump Federation *(4)*

- Information and downloadable guide for homeowners
- Check Your Region's Real Time Heat Generation Emissions Online -
- CarbonWatch displays the real time emissions from various heat generating technologies and demonstrates the increasingly stark carbon advantage delivered by heat pump deployment.

Energie Solutions *(5)*
'Energie Solutions are not just installers. We service, maintain and repair units.
We are delighted to be able to offer finance to help with the initial installation cost of installing and air source heat pump'. Finance help:

- Boiler Upgrade Scheme (BUS)
- 0% VAT on Air Source Heat pump Installations

Octopus Energy *(6)*
'Octopus Energy is planning to incorporate its smart grid technology into the heat pumps, allowing them to take advantage of cheap energy when there is surging renewables on the grid, and reducing the load at peak times.'
'By scaling production, Octopus Energy and RED (heat pump manufacturer) are hoping to bring down the costs of heat pumps.'

Daikin *(7)*
Features include

- Home solution Heat pump products
- Find an installer
- Homeowner support

- Maintenance Packages
- Daikin warranties & Stand By Me

5. Potential propositions

Awareness and Promotion *(8)*
Awareness raising, promotion and successful marketing can be instrumental in demystifying heat pump technology, and in so doing build consumer confidence

- Product promotions and programmes.
- Information dissemination.
- Roadshows, information seminars, press and PR activities.
- Involvement of trusted actors and brands.

Develop a Compelling Customer Proposition *(8)*
How to develop a compelling customer proposition. Many factors can contribute to building a strong customer proposition for heat pumps, placing them on a level playing fi eld with other competing technologies:

- The reduction of the upfront cost of heat pumps through technology and installation cost-reduction.
- The provision of heat pump tariffs.
- The provision of government grants, subsidies and incentives.

Those savings are amplified by combining a heat pump with good insulation. Poorly insulated homes with an old boiler are expected to pay annual energy costs of around £2,416 per year, however this falls drastically to around £1,512 per year when combining a heat pump with good insulation. *(9)*

6. User engagement techniques

Simplification and framing of information are crucial to making communications user-friendly and clear. This is valid for any policy intervention or programme and applies to a broad range of information, including: home energy reports, monthly bills, web portals, appliance efficiency labels and energy audit reports.

Feedback mechanisms show consumers the evolution of their energy consumption patterns throughout the day and across seasons. Their purpose is to raise awareness about how daily use of appliances, heating and air conditioning affects energy expenses. Feedback can be provided in real time, through in-home displays, mobile applications or web portals fed with data from smart metering systems. It can also be transmitted less frequently, via online or mailed home energy reports.

Leveraging social norms and comparisons can illustrate to consumers how their consumption compares to that of their peers – comparable households in the same area. This can prompt positive competition effects, motivating users to reduce their excessive energy consumption to bring it in line with the average.

Goal setting, commitment devices and reward schemes are often jointly exploited in the design of so-called demand response programmes, which invite users to reduce their electricity consumption during periods of high power prices. Utility companies also incorporate them into broader customer loyalty programmes. Such schemes are usually aimed at prompting energy saving efforts in short bursts (during peak usage times or extreme weather events) but can be used to encourage conservation over longer time horizons. Rewards can be monetary (prizes or discounts) or in-kind (free services or product give-aways).

Changes to product design and to the physical environment which leverage smart default options can simplify efficient appliance use for consumers and facilitate energy-efficient choices. For example: revising regulations that establish the default set-point temperatures of heating and cooling appliances. *(10)*

7. Feedback and engagement strategies

Immediate feedback - instant response/ reward

Cumulative feedback - over time, running total score, that the user can earn with consistent good behaviour

Normative feedback - how the users performance compares to others e.g. leader board *(11)*

Peer to peer learning
Peer-to-peer informal learning can help spread new, low-carbon technologies. Learning from the success of neighbours and others, while quickly creating a positive regulatory environment with financial incentives, can help combine state-led regulation with bottom-up innovation and enterprise. *(12)*

A sense of ‘togetherness’ in the group through sharing stories with one another, developing identity through the discussions and through this enabling the development of community

- Peer Support Groups
- Peer mentoring
- Focus groups - Collaborative learning occurs when people work in groups to discuss ideas and solve problems together.
- Social support
- Opportunity not just for users to receive help, but to give it.
- Example 'Wisdo' pairs users with buddies who have similar experience profiles for two way support
- Social Learning
- Users that are just a little bit better at something, can help motivate others. The aspirational targets are similar enough to catch up with performance with little effort *(11)*

8. References:

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